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THE GENESEE FARMER.

SATURDAY, MAY 24, 1834.

Regular Buds Originate at the PITH.

We are informed by writers on Vegetable Physiology, that common or regular buds originate at the pith when the young stem is evolved from the seed, or when the young branch is formed in the axil of the leaf. It is therefore assumed that the number of buds on a tree or shrub is definite, and cannot be increased beyond those which were originally marked on the young shoot; for when we cut off a limb, and new sprouts arise, it is only a development of such buds as had remained in a dormant state.

If we "saw out a portion of any trunk or branch on which a young bud appears," says Professor Nuttall; "and carrying the incision down to the pith, and by carefully slicing the portion horizontally, or in a right angle to the surface of the stem, till we divide the bud to its center, we shall find *a white line* extending from it through every concentric layer of the wood, till it touches the medullary sheath. It is argued however, that if an Oak, or any *old tree* be cut down in winter, leaving the root in the ground, and a foot or two of the trunk, we shall find on the margin of the stump multitudes of buds protruding in the following spring. *The fact is admitted*, but *not the conclusion inferred from it*, that these buds originate on the surface where they appear; for if they do not all push out on the same plane, which is the fact, *there is no doubt that each could be traced to the center of the trunk;* as Mr. Thompson found to be the case in the Willow, and some other soft wooded trees."

If we should be asked what is the use of understanding all this? we might reply it is always desirable that an operator should understand the reason of what he has to do; because when he does, he is less liable to make mistakes. We will give an example: "No tree," says Nuttall, "is so apt to throw out adventitious buds [as the Cherry tree], but as these would deform and injure the plant, the nurserymen cut them off close to the bark. A second crop of shoots very soon afterwards, make their appearance, which are also taken away by the knife, after which no more appear." Why? Because *all* the buds that originated at the pith, have been destroyed; and as the learned author remarks, "if the stem be now cut [off below] the existing branches, it ceases to grow."

But if we cut off the limb of an apple tree of the same size, we may confidently expect a crop of new shoots into which we may either bud or graft. Why should such be more likely to protrude from this *branch* than from the *stem* of the cherry tree? There was no more appearance of buds on the one tree than on the other. We answer, because those on the apple tree, though *concealed* had not been *destroyed*. "Every *latent* germ," says the same philosophical writer, "is *annually carried forward* in a horizontal direction, *through every concentric zone of wood*, intermediate to the medulla and the surface on which it will sprout into a branch."

In the Gooseberry and the Currant, the number of buds are comparatively few and prominent. These afford an exemplification and proof of our doctrine in the well known practice of gardeners, who plant the cuttings, but first destroy all the buds for one foot or more on the lower end of the shoot. The result is, *no suckers*. New *roots* are formed, but no new *buds;* and the bush resembles an apple tree in miniature. To render success more certain, we are always careful to take a shoot of the last year's growth; and cut off an inch or more of the lower end, because there are more small buds on that part which sometimes escape the knife.

"On Tea Drinking."

We have lately read an article on tea drinking, copied from Chamber's Edinburgh Journal, in which much is said in favor of that beverage. We had not supposed that a practice at this time so prevalent stood much in need of an advocate; but as the writer determined otherwise, we are disposed to review his principal arguments. We frankly acknowledge ourselves of a contrary opinion.

A few words more may be necessary before we enter on this task. We are not very strongly opposed to the practice of drinking tea by persons in full health, believing it one of the least noxious of all stimulants now in fashion; and for this plain reason—it is taken in more moderate doses. Our object is not to censure, but (if we can) to enlighten the understanding.

"I have generally remarked," says our author, "that those who condemn the use of tea, are themselves addicted to the drinking of intoxicating liquors of some kind or other; and that in most instances they are not a bit more healthful or more innocent than the unhappy drinkers whom they affect to pity." This we suppose to be the *Retort Courteous*. In behalf of Scotland we are not qualified to speak; but the charge does not apply in this quarter. All those within our knowledge who have laid aside the use of tea, drink no intoxicating liquors of any kind.

Our author sagely informs us that "Milk is the food of men in a rude state, or in childhood; but tea or well made coffee is their beverage in a state of civilization." And he might have added that gout, dyspepsia, palsy, and apoplexy, are the diseases of civilization. Who ever heard of such among the Indians? As a full reply to his suggestion however, we shall copy from the London Quarterly Review, the case of Professor *Adam Fergusson*: "He recovered from a *decided* shock of PARALYSIS in the sixtieth year of his life; from which period he became a strict Pythagorean in his diet, *eating nothing but vegetables*, and *drinking only water or milk*. He survived till the year 1816, when he died *in full possession of his mental faculties* at the advanced age of *ninety-three*."

We doubt if our author is quite correct in what follows: "A gentleman or lady of sedentary habits, does not require to feed like a ploughman,—but they do not do well unless with *a large quantity of liquids*, and those of a light quality." The lightest of all drinks not stimulating, is pure water.

We make another quotation: "No kind of drink is so refreshing after a journey or fatigue, as tea. It restores the drooping spirits, and invigorates the frame.—How idle it is to say that this harmless beverage is ruining the constitutions of the people of this country! The very reverse can be demonstrated. The average of human life has been greatly extended since [the use of tea has increased.]" Our author evidently succeeds best in declamation. His argument if carried out, assumes the following form: No improvement of *any* kind affecting the general health, has been made, except that of drinking tea! The *improved* state of medical science is an idle pretension! *Howard* and *Jenner* did nothing! and we owe thanks to nobody except the Chinese for that precious leaf!

Any stimulant may "restore the drooping spirits and invigorate the frame;" but the *continued use* of all stimulants is inevitably to weaken the constitution. We can make no exception in favor of tea. The excitement it induces is preternatural, and must be followed by proportionate exhaustion; but when the former is slight, so will be the latter.

Many people are subject to the headache, and take tea as a preventive or remedy. Milk is eschewed as a poison. We have seen no person more subject to that disease than we have been; and when we were induced to innovate on our former habits of drinking tea and coffee, we expected to suffer much for a time. We were most agreeably disappointed however. In a few days we were exempt from the malady; and *we have had no return of it since we abstained from those stimulants.*

We have only one more remark for our advocate of tea drinking. "It seems to be impossible," he says, "that a regular drinker of tea can be a lover of ardent spirits." Impossible as it may seem, it is nevertheless true. We are so favorably circumstanced as not to come much in contact with *lovers* of that kind; but the one that is best known to us, is very fond of tea. K.

Vernal Flowers.

[In a letter of the 15th instant.]

Three months ago the weather was delightful; and now we have winter, the ground being *covered with snow this morning*, and the thermometer an hour after sunrise standing at 28°. I have *learned* to view every thing of this kind however, without impatience. For a few minutes, the sun on rising shone bright on the frozen trees; and had it continued to do so, probably much of their verdure would have perished; but most favorably, the sky soon became overcast, and for

some hours the sun was scarcely visible. In damage from frosts, less often depends on the *intensity*, than on the manner of *increasing* the temperature. A frozen apple covered up in the earth where it thaws gradually, hardly retains a trace of its former condition; but if taken into a warm room, it softens, changes color, and loses its flavor.

I observe that shrubs perfectly hardy in winter, have not in every instance *the hardiest leaves* at this time. *Clematis florida* which perishes without a covering at that season, though it has grown nearly three feet this spring, is now less affected by the cold than the horse chestnut, or even the tulip tree. We have other examples in *Jasminum fruticans*, so tender in winter but now hardy; and in the Norway Spruce, and the Balsam Fir, almost every shoot of which is killed.

Some flowers, as we might expect, are much defaced; and those of the Silver Bell tree, are ruined; but others seem well suited with these vicissitudes. The Carolinian Larkspur (*Delphinium tricorne*), the only one that blooms with us so early* in the season, presents its dark purple spikes with unimpaired freshness. It is a beautiful plant. Unlike any other species of the genus in my possession, it is strictly *vernal* and disappears early in summer. It is a perennial with tuberous roots.

The Poet's *Narcissus* (*N. poeticus*) is very ornamental, the petals being white, and the rim of the nectary tipped with scarlet or crimson. In this it much resembles *Narcissus angustifolius;* but the latter is gone before it comes into bloom.

Dodecatheon Meadia is an elegant plant, passing into several varieties. Besides the *two* kinds with white and purple flowers, I have a *third* of not half the size, which was sent as *D. integrifolium*, but which I believe is only a variety of the former. Loudon's Encyclopædia of Plants, says there is only one species of this genus. I have a *fourth* kind however, with white flowers, from the western parts of Ohio, which differs considerably; and should these characters prove permanent, it may be specifically distinct.

It may be doubted if there is any gayer flower than the parrot tulip,—red, and yellow, and green being most capriciously intermixed; but some other varieties are more highly prized.

The summer snow-drop (*Leucojum æstivum*) has its petals on the outside tipped with green. It is a delicate white bell which is justly admired.

The Dwarf double flowering Almond amongst shrubs is one of the finest of the fine, though now a little battered by the storm. It deserves a place in every ornamental garden

Our Lilacs have been much injured by the frost. The white variety of the common kind, is the most tender, though a shrub of vigorous growth. The Siberian is a fine species; and the cut-leaved variety of the Persian Lilac is a curiosity.

I have already noticed a variety of *Phlox setacea* with flowers of snowy whiteness. We have now another in bloom with pale purple flowers of smaller size; and which I think must have sprung from the former. It agrees well with the character of *P. setacea* as given in the books.

* Loudon's Encyclopædia of Plants represents it as flowering in "July and August." This difference is so great as to lead me to suspect a typographical error. Elliott says "flowers in April and May."

The Fish Story.

[We admit the following as an act of justice, but the controversy must here close.]

R. M. W. has certainly mistaken the design of the writer whom he censures so severely. That writer made no attempt at being witty, and could not fail in what he did not undertake. He only tried to expose an absurdity in simple verse; and in this he certainly succeeded. Could not his opponent forgive this small offence? Could he not refrain from making our "bones ache" with his rhymes? * * * * *

A Looker-On.

An Address

Before the Hampshire, Franklin, and Hampden Agricultural Society; delivered in Greenfield, Oct. 23, 1833. By Henry Colman.

"The efforts to extend the dominion of man over nature," says Bacon, the great master of Philosophy, "is the most healthy and most noble of all ambitions." This admirable sentiment is in nothing more true than in its application to agriculture. Here man exercises dominion over nature; exerts a power more nearly than any other resembling a creative power; commands the earth on which he treads to waken her mysterious energies; spreads fertility over barrenness; scatters the beauties and glories of the vegetable creation, where before all was desolate; compels the inanimate earth to teem with life; and to impart sustenance and power, health and happiness to the countless multitudes, who hang upon her breast and are dependent on her bounty.

Agriculture is the great interest of every community advanced beyond the savage state. I mean no invidious distinction. The interests of the social body are various; and in proportion to its improved condition its wants are multiplied to an indefinite extent. Many hands and many arts are necessary to erect, support, furnish, light up, adorn the grand superstructure of society, and supply the wants and provide for the entertainment of its innumerable and insatiate guests. The division of labor is one of the most important improvements of civilization, and one of the surest evidences of its advancement. It is essential to the perfection of the arts of life. The humblest occupations are important; and, if useful and honest, are respectable. He who labors with his mind, equally as he who labors with his hands, is a working man. The hardy ploughman who "jocund drives his team a'field," and proudly strokes the smooth coats of his cattle, has no reason to envy the pale and emaciated scholar, poring till faint with exhaustion over the half formed progeny of his wearied brain; with eyes scarce open hunting for metaphors by the expiring rays of his midnight lamp; and waiting so long with hope deferred for the gushes of inspiration, that when at last the waters are troubled he has not strength enough left to crawl to the fountain. In the crowded hive of human life, they who build the cell, as well as they "who gather the honey to store it well" are mutually useful and essential. But among the various occupations of society, agriculture obviously holds a commanding rank. If the prince may proudly say "I govern all," and the soldier "I fight for all," and the merchant "I pay all;" the farmer may hold up his head as high as the rest, and with a noble self complacency may say "I feed all." What would become of the operative, and of what use would be the curious and exquisite machinery of the largest establishment, if the power-wheel should cease its revolutions? Manufactures and commerce, all of science and all of art, all of intellectual as well as physical good are dependant on agriculture. The agricultural products of one year are not more than sufficient for the consumption of the animal creation until the succeeding harvest pours out its golden treasures. If the husbandmen should remit his labors for a single season the human race must perish. What would philosophy do without bread? Without agriculture the thundering wheels and the buzzing spindles of the manufacturer must cease their gyrations. She too loads the buoyant arks of commerce, and bids them speed their flight to the remotest regions of the earth, and return deeply freighted with the treasures of foreign climes.

Agriculture as a profession begins to occupy the rank among us to which it has a just claim. Some of the most distinguished men in our own and other countries, in the present and past ages, men as eminent for intellectual and moral attainments as for the station which they have occupied in public regard and the part which they have performed in public affairs, have honored the profession and themselves by engaging even in its humblest labors and details; and have ingenuously confessed that they have found in its calm pursuits an inexhaustible source of interest and recreation, and a more grateful pleasure than the brilliant scenes of public life have afforded. The elements of true dignity of character are integrity, usefulness, activity, and intelligence. This beautiful valley, watered by the beneficent stream, whose name it bears, and fenced in by those magnificent highlands, which mark its progress to the ocean, presents its farming population so many examples of this noble combination, that the profession of agriculture here occupies a front rank among the most useful and respectable.

It is with unfeigned diffidence that I address an assembly of such men on this occasion. Feeling myself, even after years of inquiry and practice in this great art, only a learner and a comparative stranger in this part of the country, I was honestly averse to this duty. I shall attemt nothing more than to offer such hints, as may stimulate the inquiries of others; and should it appear, that I am greatly out of my place, I shall console myself with the reflection, that the responsibility of the appointment rests not with him who accepts, but with those who make it.

The agriculture of the counties under the auspices of this Society is highly respectable; but I trust I shall not give offence, by saying that it admits of great improvements; and by referring to some points to which our efforts for improvement may be directed.

The agricultural populaton here may be divided into three classes. First, those, who, besides cultivating some land, are likewise tradesmen or mechanics; and with their agricultural unite some mechanical or professional pursuit, to which their farming is only secondary. The returns of husbandry are in general so much slower and smaller than those from their art or trade, that the latter is likely to absorb much of their attention to the prejudice of their husbandry. There are eminent exceptions to this remark; and we owe to some of these persons many valuable experiments in agriculture, which their ready capital has furnished them with the means of making under circumstances of great anvantage.

The second class is composed of those, who, occupying small farms, look for nothing from their farms beyond the bare support of their families; having other resources, they feel independent of its returns; or devoid of ambition and indolent and improvident, they are content with the most scanty returns. Ignorant of the art of living, they are in general in the midst of the means of abundance destitute of common comforts; and are satisfied if they obtain, by a little labor inconstantly and indifferently applied, the bare necessaries of life.

The third class comprehends those with whom agriculture is an exclusive profession: who are willing to labor and are seeking the fair rewards of industry. Stimulated by an honest desire of profit, they are anxious to extend their cultivation to the farthest point which it may be carried to advantage. It is to this latter class, who alone, properly speaking, deserve the name of farmers, that my remarks will be directed.

Farming here consists of three kinds; first, dairy farming; second, grazing, embracing sheep husbandry, and the raising of young stock; and

lastly arable farming, including the consumption of the produce on the place by the stall-feeding of cattle, sheep, or swine. There are many farms, which to a certain extent combine these pursuits; but these objects are distinct, and cannot often to any great extent be advantageously prosecuted together.

1. Of dairy husbandry, I shall say little. The art of making cheese is well understood among us; and its quality in general good; but in regard to butter, great improvement is as desirable as it is practicable. Much of that manufactured here is scarcely tolerable. Any person, accustomed to eat the butter brought into the Philadelphia market, must have observed its extraordinary superiority in flavor and richness to the article generally produced among us. What occasions this superiority? There is an advantage in the spring houses of the Pennsylvanians, built of stone over some running water, where the milk is always kept, and which is devoted exclusively to dairy purposes. This and the cultivation of white clover in their pastures, the frequent churning, so that the cream is never old, the entire expression of the butter-milk, and the most particular attention to cleanliness in every part of the process, are the probable means of their success. But in these respects there is not a single circumstance in which we might not equal them; and since the difference in the prices of butter between that of an exquisite quality and that of an ordinary kind is more than a hundred per cent., our dairy farmers have sufficient inducements to endeavor to excel. The premiums bestowed for this purpose under the direction of the Massachusetts Agricultural Society have had a highly beneficial effect; and have proved that we are capable of producing as good butter as can be made. Some exhibited on the present occasion fully establishes this assertion. I may remark in this connection that little attention is paid to our pastures. Plaster and ashes are seldom applied to them, though in most cases without a doubt the application would be highly beneficial; and they are suffered without concern to be overrun with brakes, briers, and that increasing pest the Canada thistle. There is reason to believe too that our dairy farmers pay little attention to ascertain the comparative quality of the milk of their different cows, which in respect to its yield of cream, and of course the amount of butter which may be made from it, must differ very greatly; some yielding milk of the richest quality; and the milk of others being worthless.*

2. In respect to sheep husbandry and the raising of young stock many farms from their rough and mountainous character are adapted solely to these objects. The raising of neat stock, however, beyond the consumption of coarse fodder upon a farm, is not a source of great profit, unless upon land of low price. The stall feeding of beef animals upon hay and meal is likewise a very doubtful source of gain at the average price of hay and grain among us. Few farmers have exactness enough of calculation or experiment to determine whether it does or does not yield a fair compensation for their labor and produce; and the purchasing of cattle for the purposes of stall feeding, is so much matter of judgment, skill in trade, or mere accident, the thrift of different animals is so different, the state of the market is so precarious, and by the present mode of management the farmer is liable to so many impositions and frauds on the part of dishonest dealers and butchers, that the chance of success is by many judicious farmers considered very small. It were greatly to be wished that some mode or standard could be adopted of selling the animal by live weight on the hoof, to avoid the evils and inconveniences of the present mode, by which the seller is placed entirely at the mercy of the buyer with no security against fraud, and with scarcely the possibility of redress.

It is confidently believed that the sheep husbandry, when judiciously pursued, affords far better prospects of gain. It is ascertained, that no husbandry will do more to preserve and improve the condition of a farm; and those farmers, who have steadily persevered in it, even under all the fluctuations through which the prices of wool have passed, have received a full remuneration for their care and expenditure. The great question of comparative advantage between the fine wooled, the medium quality, the long wooled, or our common native sheep, presents a subject involving such various considerations, that the present time does not admit of its discussion. The introduction of fine wooled sheep into the country has been of very great advantage; and though to the serious loss of those persons, who as mere speculators, deluded by most extravagant calculations of profit, paid enormous prices for their flocks; yet to the ultimate and great benefit of those more prudent or more fortunate individuals, who came after them, and reaped the advantage of a reaction in the public estimation of the value of these races of fine wooled sheep, which the heavy disappointments of the first purchasers occasioned. Extreme fineness of fleece is obtained only at the expense of a small and tender carcase. It is confidently hoped that by a judicious combination of the merino with sheep of a larger size, a race may be gradually formed yielding wool of a sufficient degree of fineness for the common demand combined with a carcase large enough for the market. Such attempts have already been made with every prospect of success.

(To be continued.)

* In a former publication, I have stated a fact coming under my own observation, that in an experiment of milk taken at the same time and placed in the same situation, and where the cows were fed in the same manner, the milk of one cow yielded at the rate of one inch and three tenths of an inch of cream upon nine inches of milk, and that of another cow in same yard produced only two tenths—in the quality of the milk of the two cows for the purposes of making butter, the difference then was 13 to 2.

Bone Manure.—There is no part of farm management of more intrinsic importance than that of procuring, saving, and making the most of every substance, which will serve either for the stimulus or the food of plants. This subject has indeed, been very much discussed, but still we believe it possible to suggest some ideas in relation to it, which may be in some measure new and useful to some of our readers.

The value of bones for manure is not so well understood as could be wished. A writer for the *Gardener's Magazine* is of opinion that *bone-dust* is the best of all possible manures. He says, "I make use of all the bones I can by any means (robbing church-yards excepted) collect, for the use of my vine and other fruit borders, also for asparagus beds. For such purposes they answer the most sanguine expectations. There is much difference in the quality of bones."

The Worcester Herald, an English paper, has the following paragraph: "The use of ground bone as manure, particularly for turneps, is now becoming general in the counties of Angus and Perth in Scotland. Mr. Watson of Kieler farm, near Cupar Angus, says: "The bone manure has been a great blessing to the breeders and feeders of cattle in this district, and, in some instances, saved the industrious tenant from ruin. The severe drouth of 1825 did not prevent a crop of turneps with bones, while all other manures failed; and it was thus the means of bringing through that disastrous winter herds of cattle, which must have otherwise perished for want of fodder."

Willich's Domestic Encyclopædia states that "A. St. Leger, Esq. had once laid down to grass a large piece of very indifferent limestone land, with a crop of corn; and from this uniformly well dressed piece he selected three rods of equal quality with the rest, and manured them with bones broken very small, at the rate of sixty bushels per acre. Upon the land thus managed the crop was infinitely superior to the rest. The next year's grass was also more luxuriant, and has continued to preserve the same superiority for at least eight years, insomuch that in spring it is green three weeks before the rest of the field. He also dressed two acres with bones in two different fields, prepared for turneps, at sixty bushels to the acre, and found the crops incomparably more productive than the others managed in the common way. Upon grass-lands he observed that this kind of manure exerts its influence more powerfully the second year than the first. For whatever soil it be intended the bones should be broken, before they can be equally spread upon the land. No pieces should exceed the size of small marbles. To perform this necessary operation, he recommends the bones to be sufficiently bruised, by putting them under a circular stone, which being moved round upon its edge by means of a horse, in the manner tanners grind their bark, will very expeditiously effect the purpose. Although bones of all kinds may be used to advantage, yet those of fat cattle are undoubtedly the best. A. St. Leger has also found it very beneficial to mix ashes with the bones; a cart-load of the former being put to thirty or forty bushels of the latter, and heated for twenty-four hours (which may be known by the smoking of the heap,) when the whole should be turned. After lying ten days longer; this excellent manure will be fit for use."

A writer for the Gardener's Magazine says, "A good way for gardeners to collect bones for vine borders, and other purposes is to make known in the neighborhood, that they will give so much per hundred weight for all that is brought to them. As they are received they should be broken by hammers into small or large pieces, as the effect is intended to be immediate and powerful, or gradual and prolonged. For distant effect, a number of bones should be buried whole; on the same principle that opium eaters envelop pills in paper, to retard their dissolution in the stomach."—*N. E. Far.*

Painting of Buildings, &c.—For painting the roofs of buildings, Mr. Patterson, of New Jersey, has, some years since, given the following directions, which have been highly approved, as the best composition known for preserving the roofs of houses; and it is found, that it hardens by time, and is an effectual preventive against the roof taking fire from the sparks of chimneys.

"Take three parts of air slacked lime, two of wood ashes, and one of fine sand; sift these through a fine sieve, and add as much linseed oil as will bring it to a consistence for working it with a painter's brush. Great care must be taken to mix it perfectly."

We believe grinding it as a paint would be an improvement. Two coats are necessary; the first rather thin, the second as thick as can be conveniently worked.

Painting of wooden buildings, of every kind, is not only ornamental, but the owner is well repaid for this extra expense, by the greater durability which the paint gives to them, the wooden fences also, which are intended to be ornamental, round, and near buildings, should never be destitute of a good coat of paint.—*Farmer's Assistant.*

A man devoured by wolves.—The Upper Canada Herald states that a young man named Brass was attacked and devoured by wolves a short time since, near Kingston.

For the Genesee Farmer.

Cattle--No. X.

ALDERNEY AND DUTCH BREEDS.

Had I confined my description of cattle to the native breeds of Great Britain, my remarks would probably have closed with the last number, as those which follow cannot be considered otherwise than foreign, as regards England, however long they may have become acclimated. The English are therefore in the habit of speaking of them as *foreign breeds*, in contradistinction to their *native breeds*, which have already been described.

The Alderney cattle should strictly have been considered under the head of *Middle Horns*, as they are evidently of that breed *originally*, though they have assumed from the general conformation of their horns the appellation of "Crumpled Horns." To prevent, however, any misapprehension, I will here remark that their horns are generally much shorter than the Middle Horns, which have been described, and rather longer than the pure Short Horns; and for the most part, turn in, toward the front of the forehead, instead of on top, though there are many instances of both formations.

The Alderney breed was originally of French extraction, but have derived their name from the island of Alderney, where they have long been cultivated and improved. This island is situated in the English Channel, about three and a half leagues from the coast of Normandy in France. It is small, being only about four miles in length, but exceedingly luxuriant and fruitful in corn and pasture, and remarkable for its salubrity. The inhabitants live principally by agriculture, though for the sake of convenience and sociability, they are principally concentrated in a single village. Since the island was united to England under the first princes of the Norman line, the inhabitants have made London and the southeastern shores of England the principal mart for their surplus produce. Hence the introduction of their breed of cattle, and their consequent spread throughout the kingdom.

The Alderney cattle cannot be considered very valuable, as a breed for general cultivation, though they combine some excellent traits. They are generally small and ill made, but of fine bone; much inclined to fatten, and their flesh of a rich color, fine grain and well tasted. Their color is usually light red, but sometimes yellow or cream color, and their hair very thin and soft. Their constitutions are delicate and tender, which renders them unfit for cold and rigorous climates. They therefore thrive very poorly in the northern parts of England and Scotland, and would be equally obnoxious to the climate of the northern sections of the United States.

The cows are thin, unthrifty looking animals, and quite small; but to compensate in part for these defects, they yield an uncommon quantity of milk, and that of the richest and best quality. The proportion of cream compared with the quantity of milk is very large, and the butter of the most beautiful yellow color, and of the finest flavor.

Among the nobility and gentlemen breeders of England, the Alderney cows have been great pets, and in consequence a fictitious value has been often attached to them; but in no instance, that I have found recorded, has the breed been adopted entire to the exclusion of all others. They have been made exceedingly useful, however, in crossing the coarser native breeds of England, and they will long be held in high estimation for this purpose, as well as for the luxury of their milk. If no other advantage had arisen from the introduction of the Alderney cattle, than the crossing and consequent establishment of the improved Teeswater breed, and through them the celebrated "*improved Short Horns*," it would have immortalized their name among breeders and connoisseurs of cattle. The circumstances of this cross I shall have occasion to speak of more particularly in my next number.

The Alderneys are not profitable animals for either the grazier or for the dairy, and consequently can never come into general use; but will always be highly esteemed by *epicures* in both departments.

The French cattle, from which the Alderneys were derived, are generally much of the same character, though differing in size and quality according to location. A particular description of them would transcend my present limits, and I will therefore barely remark that they partake of every form, color and quality which can be attributed to British cattle, though they are for the most part of the Middle and Short Horn varieties.

In connection with this part of my subject, I will take the liberty to say a few words in reference to the *Dutch cattle*. I have not room to go extensively into an examination of their history and characteristics. They are, however, principally *Short Horns*. This breed is very generally extended through the Netherlands, Holland, Denmark, and a part of Prussia.

In Holland, great attention is paid to the rearing of cattle, and they are mostly of the Short Horn breed. They are, however, coarse in their forms and flesh, with large square buttocks, but in general good feeders and great milkers. They are in the highest estimation for the dairy, and have improved in some sections of that country with about the same rapidity as in England.

The English Short Horns have also been introduced there, and by crossing and re-crossing they have been enabled greatly to improve their cattle. Their contiguity to the eastern shores of England, has tended very much to assimilate the cattle of the same breed, and it is from this cause that the *Dutch Short Horns* are not easily distinguished from the English. Hence it is that we have so many Short Horn cattle in this country which are introduced by emigrants from Holland, and soon afterwards metamorphosed into "improved Durham Short Horns." I have seen multitudes of Short Horn cattle among our Dutch inhabitants, which are nothing more nor less than the coarse Dutch common breed, and yet upon inquiry have been told that they were the *true Durhams*. Such doubtless were the cattle alluded to by R., in No. 6 of the present volume of the Farmer, and it is particularly desirable that our farmers and breeders who are attempting the cultivation of Short Horn cattle, should avoid this cross of animals. There are occasionally very fine animals of this breed imported into this country from Holland, and when they are deserving of approbation, should be noticed as distinguished from the common breed. I have no doubt but much of the prejudice in this country against the Short Horns, has arisen from the introduction of the common Dutch cattle, which we shall see in our next number are any thing but *improved*.

As the Short Horn cattle are undoubtedly destined to have an important effect upon the cattle of our country, it is particularly desirable that we should have a perfect knowledge of their history, character and progress; and with this view, I shall in my next number enter upon their history as exhibited in England. QUERCUS.

For the Genesee Farmer.

"On Lime as a Manure."

I should feel more encouraged to answer R. M. W.'s inquiries, if when he rejects my opinions, he would give some reasons for his own.

He is puzzled with the idea that common limestone abounds with carbonic acid. This misfortune is not difficult to retrieve. If he will open *Eaton's* Geological Text Book (edition of 1830), he may find Granular Limestone at page 34, Sparry Limerock at page 36, Metalliferous Limerock at page 38, Geodiferous Limerock at page 41, and Cornitiferous Limerock at page 42, all characterized as *carbonates of lime*. Then if he will turn to Brande's Chemistry, (Macnevin's edition 1821) he may find at page 346 that *pure* carbonate of lime contains 44 per cent. of carbonic acid; and at page 130 of the same work, he may find that 46.57 grains of carbonic acid contain 12.70 of carbon. These proportions when reduced, show that 10,000 parts of carbonate of lime, contain 1197 parts of carbon. Granular limestone is sometimes a pure carbonate of lime, as he may see by examining *Cleaveland's* Mineralogy (edition 1822) page 153; and in such a case, there would be more than 119 pounds of carbon in 1000 pounds of limestone. Common limestone however, is generally impure. It will therefore be safer to reduce the estimate; and if we say one-tenth, or 200 pounds of carbon to every ton of limestone, we shall not be far wrong; neither can he conclude that my former expression was extravagant.

The moment that caustic lime (oxide of calcium) imbibes carbonic acid it becomes (of the nature of) chalk; for chalk differs not from limestone except in its texture or the arrangement of its particles. Neither does pure carbon differ from that precious gem the diamond, in any other point. R. M. W. must know that a lump of gypsum is still gypsum when ground to an impalpable powder; and that the clearest ice may be made as white as snow by scraping. Is it any thing but ice? So carbonate of lime may assume any of the 616 varieties of form figured by Count *Bournon*; and limestone be reduced to the form of chalk, without undergoing any change but in the arrangement of its particles.

When common limestone is burnt or calcined, the carbonic acid is expelled with a loss perhaps of 40* per cent. of its weight. If water be now poured on, it is imbibed by the stone, and a great evolution of heat ensues, showing that a new combination is going forward. In truth the water becomes *fixed*, forming the *hydrate of lime*. In this state it is caustic; and *lime-water* may be prepared from it, containing one-seven hundred and fiftieth part of lime.

* Forty-four per cent. when the limestone is pure.

By imbibing moisture from the atmosphere, burnt lime falls more slowly into powder, or becomes *air-slacked*, having absorbed at the same time, a little carbonic acid. In proportion to the prevalence of the latter, the lime becomes mild; and when sufficiently exposed to the air, it becomes saturated with that acid, losing all its caustic nature. But as R. M. W. feels rather shy of my statements, I will refer him for several of these particulars to *Brande's* Chemistry, page 192.

If by sulphurous *gas*, he means sulphurous *acid*, then his views are incorrect, for with lime it would not form gypsum. But perhaps he meant something else.

If he will take a ride to the plaster quarries in the town of Phelps, he may soon become satisfied that no convulsion of nature has reached that quarter; and that the gypsum so far from owing its origin to sulphurous steam rising through fissures, he may find beds of it of very considerable extent. Should he carefully examine these he will not want to trouble any third person with the matter.

He supposes that limestone after its grit and hardness have been destroyed by sulphurous gas, still retains "the original affinity of limestone for carbonic acid." It was not a stone till after it was saturated with carbonic acid; and when so saturated, it can have no further affinity for that acid. Neither could it have any affinity for it after (as he supposes) it became gypsum, for its original property had been entirely neutralized.

"The term neutralization," says *Brande*, "is applied to cases in which bodies mutually *disguise* each others' properties, as is *especially exemplified in the union of acids with alkalis.*" Now lime is an alkali; and when united with either carbonic acid or sulphuric acid, has its original property *disguised*, and has no longer any affinity for the former acid. *Cleaveland* speaking of the concretions of sulphuric acid in the form of cauliflowers, pendant from the ceilings of grottos, and adhering to the sulphate of lime,—adds, "on *which* this acid can have no action;" and for the plain reason that it had already taken in as much as it could hold.

Should R. M. W. wish to continue this subject in The Genesee Farmer, he would oblige me by *fortifying* his opinions with brief extracts from chemical authors of reputation. A FARMER.

For the Genesee Farmer.

An artificial earthquake may be made thus: Take 10 or 15 pounds of sulphur, and as much of the filings of iron, and knead them with common water into the consistency of paste; this being buried in the ground will, in eight or ten hour's time, burst out into flames, and cause the earth to tremble all around to a considerable distance.—*Imisson's Pneumatics*, 109.

MR. L. TUCKER—In my former remarks concerning gypsum, I referred to Union Springs, Cayuga county. I propose now to account for the broken state of the limestone ridge and the sulphurous gas. The above extract from Imisson is nearly the composition of iron pirates—that is, a mixture of iron and sulphur in equal parts, with just water enough to moisten, not inundate, them. In this state the pirates have the power to decompose water—the oxygen is retained, and communicates fire to the sulphur—if the heated air cannot escape freely, a convulsion, or earthquake, must of course take place. Hence the broken state of the ridge. The oxygen having set the sulphur on fire, the sulphurous gas is generated and escapes through the crevices occasioned by the convulsion. This gas coming in contact with limestone converts it into gypsum.

In the neighborhood of this quarry, is a copious sulphur spring, which shows that sulphur abounds; and as it is known that sulphur must be mixed with iron to form pirates, we may naturally conclude that iron ore exists. This has been the train of reasoning, which has drawn my mind to a conclusion, that gypsum is originally a limestone. Perhaps I may be mistaken, and if so, should be glad to be set right. R. M. W.

Potter, May 12, 1834.

For the Genesee Farmer.

Evils which may be Remedied.

I have long believed that no class of citizens was more exempt from perplexities and difficulties than farmers, and yet there are evils to which many of them are subject. These however may be lessened, if not entirely removed. To effect this would have a tendency to increase and preserve that good feeling which ought to subsist in neighborhoods.

INSUFFICIENT LINE FENCES.

It is said that "good fences make good neighbors." Although this is not the only essential, it is by no means a small one. Cattle and horses will soon find a low or weak place in a fence. That part of the fence belongs to A, yet when his grain is injured, he complains that his neighbor's cattle are unruly, and admits an unkind feeling. In vain is he told that the fence belongs to him, and ought to be strengthened—he is too busy to attend to it. B is careful to make his part of the line fence good, and often entreats his neighbor to repair his part also, but in vain. The cattle again trespass and destroy much grain—an open rupture is the consequence. Have not many of the readers of the Farmer such neighbors as A? Every farmer is bound in justice to make his part of the line fence a complete protection against cattle.

BORROWING AND LENDING FARMING IMPLEMENTS.

A disposition to be accommodating is characteristic of good farmers. Even those who are best supplied with farming implements, may occasionally want an additional article. This description of farmers seldom borrow, are careful to return the article at the time appointed, and in as good order as they receive it. My remarks are designed for a different class. Some have hardly an implement in a condition for use, and depend for years on borrowing of their neighbors. The owners when they need them have to send for them, or if returned, find them unfit for use without repairs. I know a farmer of this description, who has money at interest, but who has not had for years some of the most necessary implements; nor has he had a small wagon or a whole bag. His family must occasionally ride to the village, they must send to mill, and he must cultivate his farm; but if he can effect all these without expense, he may annually add to the amount at interest. This is gross injustice, and begets unpleasant feelings in the minds of those who have to endure it. Common justice requires that every farmer who can afford it, should be provided with a complete set of good farming implements, bags, grindstone, &c.

COLTS, CATTLE, SHEEP AND HOGS, RUNNING AT LARGE.

When much of this country was unenclosed, and the farmers had but little land cleared, it was allowable to permit creatures to run at large—but that is no longer the case. Humanity to animals requires that we should keep no more than our farms will well support, and I think that interest requires it also. Justice certainly demands it.

Many farmers are in the practice of turning a drove of young cattle into the road early in the spring. The scanty picking does not satisfy them; and hunger, if it will not break through stone walls, will often induce the poor, half starved animals to break through a rail fence into a field of luxuriant wheat or grass. Is this justice? or is it calculated to promote harmony in neighborhoods? When a gate or bars communicating with the road is left open for a few minutes, these poor creatures or a drove of hogs are sure to enter. But besides this annoyance, our road sides are much defaced by the rooting of hogs. I consider it the duty of every farmer, to keep no more stock than can be subsisted on his farm, and there to confine them. Those who are unwilling to do this should remove to the border of one of the western prairies.

DOGS.

I consider dogs not only useless, but a great nuisance. When sent to drive hogs out of a corn field, they generally cause greater damage than the hogs would have done. Good fences would prevent the necessity of keeping them for that use. In vain do farmers go to the expense of procuring the finest Merino or Saxony sheep, if their neighbors, many of them not worth a cent, are permitted to keep a pack of prowling, sheep-killing dogs. And who, possessed of a spark of good feeling, would wish to keep an animal about his premises, that is a terror to every female or child approaching the house? Damage is frequently sustained by travelers, in consequence of dogs running out and springing at their horses. The amount of injury, in person and property in one year, is greater than the value of all the dogs in the country. These considerations should induce every good citizen to do all in his power, by example and precept, to abate this nuisance.

ONTARIO.

For the Genesee Farmer.

Preservation of Timber.

The season of the year being one in which fencing occupies the attention of the farmer, has led to several articles in your valuable paper on the subject, with various suggestions for the preservation of posts, &c. Some are for pickling, some for burning, some for lime, and then again ashes are recommended, while others are for turning them bottom upwards. Elsewhere, regard to the quartering of the moon is gravely insisted on, and even a horse shoe nailed on the bottom is by some held to be a specific against decay. How is it that perhaps the *most important* and *valuable* communication that has appeared in the Genesee Farmer, or any other agricultural paper, has not superseded all these recommedations for preserving timber? Why not give their attention to the really scientific and almost conclusive

experiments of Mr. Kyan? It would seem as though that valuable and interesting article, selected for your paper under the signature B., had passed unread or without the consideration due to it, coming as it does supported by the result of five year's experiment. It would seem so, because it has excited no further notice nor inquiry in relation to it! and I fear it has given rise to no experiments, or I think some more particular information would have been called for by the practical farmer. Under this impression—not having the paper within my reach containing B.'s extracts—I will again ask the practical man's attention to a few facts in relation to Mr. Kyan's discoveries, as detailed in a lecture delivered by Prof. Faraday, at the Royal Institution, London, in Feb., 1833.

Corrosive sublimate had long been known to possess an anti-destructive property; and a gentleman, reflecting on this property, proposed to apply it to timber for the prevention of dry-rot—that is, cases of decay whether arising from one cause or another, and no matter how shown. Mr. Kyan's conviction of its efficacy became such, that he laid the subject before the Admiralty, who required nothing less than the test of the "Fungus Pits" at Woolwich, to prove the soundness of the application. Submitted to this for two or three years, the Admiralty advised Mr. Kyan to take out a patent, and are still engaged in watching the progress and results of the severest trials which have been suggested since that time. A solution of corrosive sublimate is made, and the timber or other substance to be preserved is saturated with the solution—this being done, it is dried, and said to be prepared.

This lecturer then said that, "Besides the application of corrosive sublimate to timber, it has been applied to various fabrics not composed of wood, as for instance, canvass, cotton, tows, and hemp, to prevent their decay. Before him were some of the pieces submitted to trial by order of the Admiralty three years ago in the "Fungus Pits" at Woolwich, which he (Prof. Faraday) went the other day to see opened. * * * * One specimen was a piece of timber which came out at the end of three years as sound as it went in! but the unprepared timber had decayed up to the very joints. No part of it had been left. It had decayed and become rotten throughout, but the piece before them was left whole and sound, and fit for the construction of vessels. Last week he saw a large cube of wood which had been there first for three years; it was taken out and examined, and put in for two years more, altogether making *five years*. That cube of wood was again taken and examined by him on Tuesday (the 19th Feb.); it was perfectly hard and sound. There was no sign of decay in that wood which had been submitted to the rotting action for five years, nor of that destruction which seems to have come on so soon in the same pit with other pieces of wood."

The Professor also stated that —— —— had some prepared, and unprepared posts, placed in the most destructive situation, exposed to the same actions. After a certain time, the unprepared posts decayed, the others still stand preserved by the power of the solution.

Experiments made on cotton and canvass gave the same results; speaking of prepared and unprepared calico, Prof. Faraday remarked, "One was as it went in, but the other was the calico corresponding to it which had rotted and decayed. It was not possible to unfold without destroying it, yet it had been similarly exposed as the other."

This able and investigating chimist then confesses himself "perfectly satisfied of the preservative effects of corrosive sublimate," but still he had some distrust as to its application, lest the effect might be merely temporary, and that after a *certain* time fermentation might again be brought on and decay ensue. But from these doubts he was relieved by a course of experiments that satisfied him—for he found that a chimical combination took place between the corrosive sublimate and the body to be preserved, and that it prevents the destructive power going on, by combining and forming a new chimical compound with the albuminous matter of the wood. "He had before him by way of illustration, a solution of corrosive sublimate, which would prove that the juices, or rather substances remaining from the juices, in the fibres of the plant, were easy of combination; and if a stem or branch of a tree were cut, the branch allowed to bleed and the sap made to flow into a solution of the corrosive sublimate, combination did take place.

Professor Faraday found that no part of the properties of the corrosive sublimate were subdued, and in fact the substance was not in that state in which it could be volatilized, or removed at ordinary temperatures. Calico was washed repeatedly and thoroughly in water, for he considered if the properties of the application would resist the effects of water in calico, it assuredly would do so in timber. The prepared piece of calico, with an unprepared piece, thus washed, were laid on a board and placed in the cellar, and in due time were examined, when it was found that the latter was covered with a coat of fungus nearly half an inch thick, and the prepared calico was quite free from it." Afterwards, the mercury *was* separated by nitric acid, showing that it had been in combination. This able investigator then adds, "I think the improvement so great as fully to justify its extensive application."

This is a subject, it seems to me, of great general interest, not only to the farmer, but to every individual, and of great importance to all those who work in wood, not only as a security against decay, but as the most perfect mode of seasoning timber for the use of cabinet makers, carpenters, and others, in as much as mahogany and the most compact woods may be seasoned with the greatest certainty and perfection in the short space of two months! It is also an effectual protection against the destructive ravages of insects of every description. But, sir, to return to the more immediate interest of the farmer in these experiments, it will, if the application of so simple a preparation should prove permanently protective, give a usefulness and value to timber that is now only used in our stoves and fire places, making it applicable to all the purposes of building, and a sufficient substitute for the more expensive kinds in the form of posts, rails, fences, gates, hop poles, felloes, spokes, shafts, &c. &c. &c. It will also give durability to our cart covers, rick cloths, bags, &c. &c.; and is an easy defence against moths in carriage linings and other woolen articles, where it can be safely used, for it is a poison.

In the several publications sent me on the subject, I no where found the required strength of the solution, which I have since ascertained to be one pound of corrosive sublimate to five gallons of water. Of this a pine board will take up its quantum in forty-eight hours, in the proportion of about five ounces of the solution to every 216 cubical inches—thus to prepare a post six inches square, that was to be set in the ground two feet six inches, there would be a consumption of about twenty-five to thirty ounces of the solution.

I would suggest sinking a vat or tank in the ground, well set in clay, and made of plank about three feet deep, and of a length that may be most convenient. Filling this tank with the solution, the posts to be prepared may be set upon the ends intended to be put into the ground, until they have imbibed their quantity, and then removing them let them be replaced by others, and so on. It will be necessary that the tank should stand under cover from rain, and prudence will at once suggest the propriety of having it under lock and key.

Perhaps B. has already commenced the preparation of timber upon Mr. Kyan's plan; if so, we shall probably nave some useful information from his pen, as to the best and least expensive way of preparation, with its actual cost in this country. Or the New York State Agricultural Society may think well of causing a series of experiments to be instituted and reported through their own useful little paper, "The Cultivator."

Could I have lain my hand on the extracts on this subject, which have already appeared in your paper, but which I believe are in one of the numbers of the third volume, now at the binders, I probably should not have been led into so much repetition. You will, however, prune and curtail my long communication to suit your own convenience and the patience of your readers. R.

Maple Grove, April 25, 1834.

Management of Seed Beds.

Water occasionally the seed-beds of all kinds of trees and shrubs, in dry weather; but this must be practiced both before and after the plants begin to appear.

Observe at all times to water these beds with moderation; a little and often must be the rule. Likewise be very careful not to apply the water over hastily at any time for that would be apt to wash the earth away from the seed, and also from the young plants now beginning to come up; being particularly careful of the more tender and delicate sorts:—generally let the refreshments of water be repeated moderately once every two or three days in warm dry weather; for this will be of great service to all such kinds of seeding plants.

Shade will also prove very beneficial in the middle of hot sunny days, to many of the choice kinds of seedling trees and shrubs, about the time of their first appearing, and for some time after.

These young plants may be shaded from the sun occasionally, by fixing hoops across the beds; then let mats be drawn over the hoops as often as occasion requires.

Where there are boxes, pots, or tubs of of seedling plants, let them be placed in a shady situation, about the middle, or towards the latter end of this month, where they may have the morning sun only.

All beds of seedling trees and shrubs, whatever, must be kept perfectly clean from weeds.

This should be carefully attended to, for

the weeds are much quicker of growth than the youn gseedling plants of trees & shrubs, and would soon get the start of them if permitted to stand, and would do much damage. Therefore let the weeds, as soon as they appear in the beds, be cleared out, before they get to any great head, performing it by very careful hand-weeding.

Care of new planted Articles.—Water new plantations of the tenderer kinds of young evergreens and flowering shrubs, &c. but in particular those which were lately planted out from the seed beds; these must not be forgotten in dry weather.

Once a week will be often enough to water any new plantations, even in the driest season, and to those that are but lately planted: but such as have been planted in autumn or early in the spring, will require but very little watering.

Cuttings, either of fruit or forest-trees, flowering-shrubs, or evergreens, which were planted last autumn or this spring, must also be watered now and then in dry weather.

Transplanting.—Evergreens, of most sorts, both seedlings and others, remaining in too close growth, may yet be translated; but this should be forwarded as much as possible in the beginning of this month, or wholly completed by the middle, in all the requisite principal plantings.—*Gardener's Calendar.*

Soot Destroys Cut Worms.

Soot destroys or drives off from all plants of the cabbage tribe, from pinks, and from other plants, those common and voracious grubs of gardens, the larvæ of the moths of the family Noctuadæ. After being annoyed almost to despair, by the ravages of this grub, I resorted to the use of soot, and thus applied it:—*I laid it dry, and near an inch thick over the ground, and had it dug in.*—The plants were then planted from 20 to 25 in a row, and so effectual was the soot that instead of losing eight or ten plants in one row, as I before had done, I think I did not lose more than that number in a bed of 200 or 300. In the grub's attacks on plants of the cabbage family, its habit is to eat some nearly and others quite asunder, a little below the heart: it often greatly annoys the farmers in their turnip fields. I have made use of the same remedy since and have never found it to fail. Last summer I was troubled with the grub in a bed of pinks; I then made some soot water, and watered the bed well, and the bed was soon freed from the grubs. The precise mode of the soot's action on the grubs I cannot state: but I believe that the ammoniacal matter which it contains destroys some and disperses the remainder. I shall gladly receive any information on this head. I have not found the soot injure the soil at all; and I name this because I had been told it would.—*Farmer and Mechanic.*

Gardener's Work for May.

The present month is an important one in the operations of the garden. If not already done, no time should be lost in sowing the seed of onions, sallads, early cabbage, peas, radishes, and in planting some early corn and potatoes. The beat, carrot, parsnep, and summer squash may also be sown. Cabbages for winter use may be sown in time, from the 20th to the 30th. As soon as the soil and the season are warm enough to bring up corn, which here is generally from the 15th to the 20th, plant your melons, pumpkins, and cucumbers, though it will do equally well to plant the latter, for pickles, in the early part of June. The 15th will ordinarily do for Lima beans, which are the best of the bean family. Soak the seed of these in warm water, a few hours, and cover them slightly. My practice is to save this crop for winter use. They afford a great product. When frost is apprehended, the beans are all picked, the unripe ones shelled and dried; and, if soaked before cooking, are nearly as good as when first gathered from the vines. An acquaintance digs a large hole, in which he deposites a barrow of dung, which he covers with six inches of earth, and plants the Lima beans, and puts down poles upon the border of the manured circle. In this way they are said to grow luxuriantly, and to produce in great abundance. Of the pumpkin there are several new and much esteemed varieties, as the Valparaiso, Porter and acorn squashes. These are rather later in coming to maturity than the old yellow kind; though they have been successfully cultivated among corn. We would commend the planting out, or sowing seeds of parseley, balm, worm-wood, tanzy, garlick, hyssop, rue, sage, thyme, and other herbs, which are often required in a family.

Plant your seeds when the ground is fresh dug or ploughed, when it is filled with atmospheric air, and moist, and permeable to heat, three indispensable requisites to the vigorous germination of the seeds. They will then sprout quick, and grow luxuriantly.—*Cultivator.*

ROTATION OF CROPS IN PENNSYLVANIA.—A farmer gives, in the Farmer's Reporter, a concise view of the mode of Agriculture in Pennsylvania. The corn is always planted on sward ground, carefully ploughed once, two or three weeks before time of planting. It is well harrowed without disturbing the sod; marked off into furrows three feet apart, in which the corn is planted in hills, one and a half or two feet apart. A little plaster is sprinkled on the hills when well up—harrowed and ploughed once—when too thick, the stalks are thinned. By this method, "we now raise," says the writer, "forty to sixty bushels of corn to the acre, where twelve or fifteen years ago, it was thought a crop of corn could not be obtained at all."

The next crop is oats, sown the succeeding spring. Wheat succeeds the oats, when barnyard manure is carted on. A rye crop follows the wheat. Clover seed is sown on the rye in March. The clover is allowed to remain two or three years, and plastered; when the same rotation commences again.—*N. Y. Farmer.*

BREAD.

It is not generally known that the best and finest bread must contain both alum and potatoes. To five bushels of flour there must be 28 pounds of alum and a bushel of potatoes. The alum is ground in with the wheat at the mill, and the potatoes are boiled by the baker's servants and rubbed unpeeled through a seive. Without these ingredients the bread would neither be white or light; so that not only does a great profit induce the usage, but the improvement of the article for sale requires it. The bad taste of the alum is taken away by the fermentation of the dough. Sometimes instead of yeast which is occasionally very difficult to procure sweet the great bakers use volatile salts, with which they ferment some of the dough, and that ferments the rest without any yeast. The above mentioned quantities of flour, alum and potatoes, will make 80 quartern loaves, and the quantity of potatoes accounts for the fact that excellent bread can be got from the bakers cheaper than it can be made at home.

☞ We copied in our last paper from the Genesee Farmer, a paragraph on the preservative quality of *lime* when applied to timber in damp places. Since then a respected friend from Salisbury township in this county, has informed us that in removing some planks which had lain in a damp situation for upwards of 40 years, he discovered that lime had been placed under a portion of them, seemingly for the purpose of an experiment, whilst others were suffered to rest upon the bare ground. Upon a careful examination he found that wherever the wood was in contact with the lime, it was perfectly sound and firm, as much so as when it was first laid, whilst every other part was more or less, and the greater portion of it, entirely decayed.—*Lancaster (Pa.) Examiner.*

LAYING PLANTS.—Mr. Munro, in Loudon's Magazine, recommends splitting the layer for some distance, instead of the common method of notching or tonguing them. They are not as likely to break, and send out fibrous roots sooner. A piece of clay or moss is put in the slit to keep it apart.

Monroe Agricultural Society.

☞ The officers and members of the Monroe County Agricultural Society, are requested to attend a meeting of the Society to be held at the Monroe House in the city of Rochester on Saturday the 31st of May, inst. at 1 o'clock, P. M. for the purpose of taking the preparatory measures for the annual meeting and Fair to be held the ensuing autumn.

☞ It is hoped that the officers, and all others who feel a sufficient interest in the cause to extend to the Society their aid, will be prompt in their attendance.

WM. GARBUTT, *President.*
LUTHER TUCKER, *Sec'y.*

List of Subscribers

Who have paid for the 4th volume of the Genesee Farmer—continued.

James K. Guernsey.	Joel Soverhill.
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The following have paid to July 1, 1834.

William Frisbie.

PRICES CURRENT.

ARTICLES.	PER	*May* 23. ROCHESTER.	*May* 19. NEW-YORK.
Ashes—Pot....	100lbs.	$3,25.....	$4,12 a 0,00
—— Pearl..	.....	3,50.....	4,60 a 4,65
Beeswax, yellow	lb.	0,16 a 0,18	20 a 21
Candles, mould	.....	0,10 a 0,11	13. a 14
—— dipped.	.....	0,09 a 0,10	11 a 12
Cloverseed.....	.....	6½.....	6 .a. 6½
Flax, American.	.....	.....	8..a. 8½
Flax seed, clean	tierce	9,00a10,00	10,50a11,00
Flour, Western.	barrel	4,50.....	4,88 a5,12
Grain, Wheat..	bushel	0,84.....	1,03 a1,06
—— Rye.....	.....	0,62.....	62..a..65
—— Oats...	.....	0,25..a..27	38..a..39
—— Corn...	.....	0,44.....	70..a..00
—— Barley..	.....	0,50..a..56	70..a..71
Hemp, Americ'n	ton	.....	100 a 125
Hops, 1st sort .	lb.	.....	10..a..11
Plaster Paris...	ton	6,00 a 0,00	2,75 a0,00
Beef, Mess....	barrel	0,00 a10,00	8,75 a9,50
—— Prime....	.....	0,00 a 8,00	5,50 a 5,75
Pork, Mess....	.....	14,00a15,00	13,25a14,25
—— Prime....	.....	11,00	9,25a10,50
—— in the hog.	100lbs.	4,00.....	.....
Hog's Lard....	.....	8,00 a 9,00	6,50 a 8,50
Tallow.....	.....	7,50 a 8,00	7,00 a 7,50
Hay.....	ton	7,00 a 8,00	9,00a11,20
Apples.....	bushel	50..a.100	.....
Potatoes.....	.....	18..a..25	.....
Cheese.....	lb.	6..a...8	7½..a..09
Butter.....	.....	12...a.14	12½..a...16

(From the Liverpool Chronicle.)

First Flowers.

First flowers of the spring time,
Bright gems of the year,
All lovely and blooming,
How fresh ye appear;
Springing up in the garden,
The hedge-row and vale,
Enriched by the showers,
And fann'd by the gale.

Your beauty is transient,
But oh! it is sweet,
As the deep felt emotion
When absent friends meet
After dangers surmounted
And miseries flown,
Their lips and looks telling
Of days that are gone!

Your herald—the tempest:
Your bed—the cold earth;
Unshelter'd and sunless,
The place of your birth:
The snowdrift is sweeping,
And dimly the morn
From the eastward is stealing
To hail your return.

MISCELLANIES.

GENERAL EDUCATION.

A strange idea is entertained by many that education unfits persons for labor, and renders them dissatisfied with their condition in life. But what would be said were any of the powers of the body to be in a certain case disused? Suppose a man were to place a bandage over his right eye—to tie up one of his hands—or to attach a ponderous weight to his legs—and, when asked the cause, were to reply, that the glance of that eye might make him covetous—that his hand might pick his neighbor's pocket—or that his feet might carry him into evil company,—might it not be fairly replied, that his members were given to use and not to abuse, that their abuse is no argument against their use, and that this suspension of their action was just as contrary to the wise and benevolent purpose of their Creator as their wrong and guilty application? And does this reasoning fail when applied to the mind? Is not the unemployed mental faculty as opposed to the advantage of the individual as the unused physical power? Can the difference between mind and matter overturn the ordinary principles of reasoning and of morals? Besides, how is man to be prepared for the duties he has to discharge?—By mere attention to his body? Impossible. The mind must be enlightened and disciplined; and if this be neglected, the man rises but little in character above the beasts that perish, and is wholly unprepared for that state to which he ought to have aspired.—*Wilderspin's Early Discipline.*

THE SECRET OF GREAT WORKERS.

M. Dumont, in his 'Recollections of Mirabeau,' the leading orator of the French revolution, thus describes the persevering industry of our illustrious countryman, Sir Samuel Romilly:—"Romilly, always tranquil and orderly, has an incessant activity. He never loses a minute: he applies all his mind to what he is about. Like the hand of a watch, he never stops, although his equal movements in the same way almost escape observation."

INSTRUCTION AND AMUSEMENT.

Are more blended than the world in general is apt to imagine. Uninstructive amusement may be afforded by a passing jest or a ludicrous anecdote, by which no knowledge is conveyed to the mind of the hearer or the reader; but the man who would amuse others for an hour, either by his writing or his conversation, must tell his hearers or his readers something that they do not know, or suggest to them some new reflexion upon the knowledge they have previously acquired. The more the knowledge bears upon their occupations, or upon their interests, the more attractive it will be, and the more entitled to be called useful.

COMPRESSION OF WATER.—Mr. Jacob Perkins has invented an apparatus, which, by hydrostatic pressure, compresses water to an extent equal to one-fourteenth part of its volume. The force employed is equivalent to a pressure of 300,000 pounds to the square inch, and is applied to other fluids. In most of our works on natural philosophy, water is treated as incompressible and non-elastic; by this apparatus the opposite of these two propositions is clearly shown. There was considerable difficulty in getting a vessel capable of resisting so high a pressure; and the chief feature of this instrument is the manner of constructing the cylinder, which is formed of a series of concentric tubes: thus the inner or smaller tube is first formed by welding, and is turned accurately on the outer surface; the next tube is then formed and is accurately turned on the inner surface, and the bore of this second or outer tube is just too small to receive the first tube, but, in order that it may do so, it is heated, till by expansion, it is capable of receiving the first tube within it, and in cooling, the second tube shrinks on the first tube and strongly embraces them together; a third tube, a fourth, and so on, are similarly put on, till a cylinder is produced capable of withstanding any pressure.—*Rep. of Inventions.*

A SPRING MORNING.—"For my own part," says Addison, "I value an hour in a spring morning as much as common libertines do an hour at midnight. When I find myself awakened into being, and perceive my life renewed within me, and at the same time, see the whole face of nature recovered out of the dark and uncomfortable state in which it lay for several hours, my heart overflows with sentiments of praise to the great Author of Nature. The mind in these early seasons of the day, is so refreshed in all its faculties, and borne up with new supplies of animal spirits, that she finds herself in a state of youth, especially when she is entertained with the breath of flowers, the melody of birds, the dews that hang upon the plants, and all those other sweets of nature that are peculiar to the morning."

Expedition to the Niger.—Fresh advices have been received from the indefatigable Lander. He had returned to the coast the second time, for the purpose of procuring goods for the markets on the river. He had ascended the Niger into the interior of Africa, and had been up the Tshadda, a branch of the Niger, 150 miles. Mr. Laird, who accompanied the expedition, has arrived in London. He relates that they found a city called Nunda, on the Tshadda which contains 60 or 70,000 inhabitants. The walls are 20 feet high. The king is a brutal savage. He has in his seraglio 1500 women. He detained the English and would not let them return, pretending to be influenced by the gods. He said the gods, had been frequently consulted, but they wo'd not give a favorable answer. Laird took advantage of the king's superstition; told him he would send a messenger to the gods and if it burned blue, it would be an indication of a favorable reply. Laird sent up a blue light, which made such an impression on the king that he released the party. The slave trade is carried on up and down the Niger. While Mr. Laird was up the river, about 1000 of the people of Nunda, made an incursion along the bank of the Niger, and sacked the country far and wide. Their object was slaves and booty. They make pipes so long that they can smoke when riding, with the bowl of the pipe resting on the foot. They are ignorant of distilling, and have not yet acquired a taste of rum. At one place on the Niger, the priests sacrificed a human victim, and threw the body in pieces in the river to prevent the English going up; the ignorant natives thought this would put a stop to their progress, and were much disappointed, when they found the incantations of the priests of no avail.

DEATH OF A CHILD OCCASIONED BY A CAT.—A friend intimately acquainted with the facts, and whose statement may be relied on, informs us that a few days since an infant only six months old was killed by a cat having sucked its blood from the nose of the child while asleep in the cradle. The child was found with the blood to its nose, warm, but lifeless. The cat remained in the cradle with its mouth and nose immersed in blood, and so gorged as to be unable to leave the place. A medical examination took place, and the result was from the loss of blood by the child, and a great quantity found in the cat, which was killed, that the life of the child was taken by the cat.—*Dai. Adv*

COAL *vs.* GOLD.—In a work lately published by a Spaniard, there is a comparison between the produce of the gold and silver mines in America and the coal mines in England, from which it appears that the gross value, of the annual produce of the coal mines, which is 18,000,000 tons, amounts to 450,000,000 francs, including the wages, and other charges: whilst the produce of the gold and silver mines, including the same charges, is only 220,5000,000 francs; showing a balance in favor of the coal mines of England, over the gold and silver mines of the New World of no less a sum than 227,500,000 francs.

A CURIOUS HORTICULTURAL ANECDOTE.—When Sir Francis Carew had rebuilt his mansion house at Beddington in Surrey, he planted the garden with choice fruit trees. There he was twice visited by Queen Elizabeth; and Sir Hugh Platt, in his Gardens of Eden, tells a curious anecdote relating to one of these visits. "I conclude," says he, "with a conceit of that delicate knight, Sir Francis Carew, who, for his better accomplishment of his royal entertainment of our late Queen Elizabeth, led her majesty to a cherry tree, whose fruit he had of purpose kept back from ripening at least one month after all cherries had taken their farewell of England. This secret he performed by straining a tent or cover of canvass over the whole tree, and wetting it now and then with a scoop, as the heat of the weather required; and so by withholding the sunbeams from reflecting upon the berries, they grew both great, and were very long before they had gotten their perfect cherry color; and when he was assured of Her Majesty's coming, he removed the tent, and a few sunny days brought them to their maturity.—*Platt's Garden of Eden.*